

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

151784

IN THE MATTER OF:)
)
RIVERDALE CHEMICAL CO.)
CHICAGO, HEIGHTS ILLINOIS)
)
Proceeding Under Section) U.S. EPA Docket No.
106(a) of the Comprehensive)
Environmental Response,)
Compensation and Liability)
Act, 42 U.S.C. §9006(a))
(1980))

ADMINISTRATIVE ORDER
BY CONSENT

The signatories to this Administrative Order By Consent ("Consent Order"), by their respective attorneys, having agreed to the entry of this Consent Order,

THEREFORE, It is Ordered, Adjudged, and Decreed that:

I. JURISDICTION

This Consent Order is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 U.S.C. §9606(a), and delegated to the Administrator of the United States Environmental Protection Agency ("U.S. EPA") on August 14, 1981, by Executive Order 12316, 42 Fed. Reg. 42237 (Aug. 20, 1981), who duly redelegated the authority to the Regional Administrator of Region V, USEPA on April 1, 1983.

II. FINDINGS

The Regional Administrator, U.S. EPA has determined that:

1. The Riverdale Chemical Co. site (hereinafter "Site") consists of approximately 4 to 5 acres of industrial property and is located at 220 East 17th Street, Chicago Heights, Illinois.

2. Since approximately 1956, the Site has been used, inter alia, for the formulation of various pesticides, herbicides and insecticides. Active ingredients which have been formulated at the Site include, but are not limited to: 2,4,5 - Trichlorophenoxy Acetic acid (2,4,5-T), 2,4 - Dichlorophenoxy Acetic Acid, Silvex as well as various other pesticidal ingredients.

3. Soil samples were collected at the site on April 24, 1984. The results of analysis of these soil samples revealed detectable amounts of 2,3,7,8 - Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) in thirteen on-site samples as well as concentrations of various insecticides including aldrin, dieldrin, chlordane, 4,4-DDT, 4,4-DDE, 4,4DDD, heptachlor and toxaphene. Soil sample analyses included the following highest concentrations:

| | |
|---------------|---------------|
| 2,3,7,8- TCDD | 364 ppb |
| aldrin | 250,000 ppb |
| dieldrin | 79,000 ppb |
| chlordane | 1,100,000 ppb |
| 4,4 DDT | 4,700 ppb |
| heptachlor | 190,000 ppb |
| toxaphene | 160,000 ppb |

The foregoing are "hazardous substances" as defined in Section 101(14) of CERCLA.

4. 2,3,7,8-TCDD is a toxic chemical, known to be associated with the chemical manufacture of herbicides formulated with Silvex and 2,4,5-T (both of which have been used

at the Site). Because of the remarkable stability of 2,3,7,8-TCDD in biological systems and because of its toxicity, cumulative effects of even small doses present major concern. 2,3,7,8-TCDD, aldrin, dieldrin, chlorodane, 4,4 DDT heptachlor and toxaphene may have adverse effects on health.

5. The Site is a "facility" as defined in Section 101(9) of CERCLA;

6. Respondent is a "person" as that term is defined in Section 101(21) of CERCLA;

7. "Hazardous substances" including 2,3,7,8 TCDD as defined by Section 101(14) of CERCLA have been detected in soil samples at the Site;

8. The presence of these hazardous substances in the soils at the Site constitutes a "release or threat of release" as that term is defined in Section 101(22) of CERCLA, which may present an imminent and substantial endangerment to public health or welfare of the environment;

9. Respondent is a "responsible person" within the meaning of Section 107 of CERCLA;

10. The actions to be taken pursuant to this Consent Order are reasonable and necessary to protect the public health or welfare and the environment.

III CONSENT

Respondent agrees to undertake the actions requested by the U.S. EPA in this Consent Order within the time periods provided. The Work (as hereinafter defined) to be undertaken pursuant to this Consent Order is appropriate for determining the appropriate extent of response authorized by CERCLA and is not inconsistent with the National Oil and Hazardous Substances Contingency Plan, 40 C.F.R. Part 300 (1983).

IV. PARTIES BOUND

This Consent Order shall apply to and be binding upon the Respondent, its successors and assigns and U.S. EPA (the "parties"). Respondent shall be responsible for ensuring that its officials, officers, directors, agents, principals, servants, employees, and all persons, firms, and corporations acting under or for the Respondent including subsidiaries and divisions of the Respondent, comply with the terms of this Order. Each representative of a party who signs this Consent Order certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Order and to legally bind such Party to this document.

V. NOTICE TO THE STATE

The requirement of Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (hereafter "CERCLA") 42 U.S.C. §9606(a), to notify the State of Illinois has been satisfied.

VI. REMEDIAL INVESTIGATION/FEASIBILITY STUDY

A. Respondent shall complete a Remedial Investigation ("RI") and perform a Feasibility Study ("FS") (together referred to as "RI/FS") of the Site and the immediately surrounding area in accordance with the RI/FS Work Plan (hereinafter the "Work") attached hereto and incorporated herein as Exhibit A. The RI/FS shall be conducted in accordance with the National Contingency Plan, 40 C.F.R. Section 300.68(e) through (j), 31216-31217 (July 6, 1982).

B. All plans, reports or other documentation required pursuant to the Work to be developed by Respondent and submitted to U.S. EPA shall be subject to the provisions of Paragraph IX below. The major submittals set forth in the work shall be submitted by Respondent to U.S. EPA in accordance with the following schedule:

(1) The Health and Safety Plan described in Paragraph 2.1.1 of the Work shall be submitted within sixty (60) days of the effective date of this order.

(2) The Quality Assurance Project Plan described in Paragraph 2.1.1 of the Work shall be submitted within sixty (60) days of the effective date of this order.

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(3) The Sampling Plan described in Paragraph 4.00 of the Work shall be submitted within ninety (90) days from the effective date of this order.

July 24

(4) The draft Remedial Investigation report described in Paragraph 5.0 of the Work shall be submitted in accordance with the implementation schedule to be submitted with the Sampling Plan described in Paragraph 4.0 of Exhibit A.

(5) The RI/FS Report described in Paragraph 1.0 of the Work shall be submitted in accordance with a schedule approved by U.S. EPA and submitted with the draft Remedial Investigation Report.

VII. PROGRESS REPORTS

A. Respondent shall provide to U.S. EPA written progress reports which describe the actions which have been taken toward achieving compliance with this Consent Order during the previous month as well as actions which are scheduled for the next month. These progress reports are to be submitted to U.S. EPA by the tenth day of every month following the effective date of this Consent Order.

B. Documents, including progress reports and approvals, to be submitted to the Parties shall be sent by certified mail return receipt requested to the following addressees or to such other address as the Parties hereafter may designate in writing:

1. -Those documents to be submitted to U.S. EPA should be sent in duplicate to:

Director, Waste Management Division
U.S. EPA, Region V
230 South Dearborn Street
Chicago, Illinois 60604
Attn: Neil Meldgin

2. Those documents to be sent to Respondent should be
sent to: Riverdale Chemical Co.
220 East 17th Street
Chicago Heights, Illinois 60411
Attn: Michael J. Champion, Ph.D.

C. If the date for submission of any item or notification required by this Consent Order falls upon a weekend or State or Federal holiday, the time period for submission of that item or notification is extended to the next working day following the weekend or holiday.

VIII. PROJECT COORDINATORS

A. Respondent and U.S. EPA shall each designate a Project Coordinator and Alternate Project Coordinator for the purpose of overseeing the implementation of this Consent Order. To the maximum extent possible, except as specifically provided in the Consent Order, communications between Respondent and U.S. EPA concerning the terms and conditions of this Consent Order shall be made between the Project Coordinators. During the course of implementation of the Work, the Project Coordinators shall, whenever possible, operate by agreement. The Project Coordinators shall attempt to resolve disputes informally through good faith discussion of the issues.

B. Within five (5) days of entry of this Consent Order, the parties shall notify each other, in writing, of the name, address and telephone number of the designated Project Coordinator and an Alternate Project Coordinator.

C. Each Project coordinator shall be responsible for assuring that all communications received from the other Project Coordinator are appropriately disseminated and processed.

D. The Project Coordinator for U.S. EPA ("OSC") shall have the authority vested in an on-scene coordinator by 40 C.F.R. Part 300 (1983), including authority to require Respondent to cease performance of the Work or any portion thereof which in the opinion of the OSC may or does present or contribute to an endangerment to public health, welfare or the environment and to take such other action as is necessary to avoid or mitigate such endangerment. In the event that the OSC does require such cessation of the Work, Respondent shall continue to have the obligation to perform the Work consistent with Exhibit A of this Consent Order.

Unless stayed or set aside by a court of competent jurisdiction as provided herein, Respondent shall fully comply with all orders and instructions of the OSC issued under this paragraph. Orders issued under this paragraph are not subject to the provisions set forth in Paragraph IX below.

E. Either the Project Coordinator for Respondent or the Alternate Project Coordinator for Respondent shall be on-site

during all hours of site work and shall be on call for the pendency of this Consent Order.

F. Any Project Coordinator upon request may obtain a split or duplicate sample from any sample being taken at the site by any other Project Coordinator or representative of any other Party. Respondent's Project Coordinator shall notify the U.S. EPA not less than five days in advance of any sample collection for which such Project Coordinators have indicated that they wish to obtain split or duplicate sample. Respondent reserves its right to dispute its liability for costs of any samples taken or analyzed by U.S. EPA which it deems unnecessary and such dispute shall be determined in accordance with the provisions in Article IX hereof.

IX. REVIEW OF DOCUMENTS; RESOLUTION OF DISPUTES

A. 1. U.S. EPA shall review each document submitted to it within thirty days of receipt and advise Respondent in writing as to whether the document is approved or disapproved. In the event Respondent is notified that the document is disapproved in whole or in part, U.S. EPA shall advise as to the modifications or additions which must be made to the document prior to approval, and a schedule for completion of such modifications or additions. U.S. EPA shall base any decision to approve or disapprove a document upon whether it has been completed in conformance with the standards and specifications set forth in the Work (Exhibit A of the Consent Order) and whether such document is consistent with the National Oil and Hazardous Substances Contingency Plan, 40 C.F.R. Part 300 (1983).

2. If Respondent does not object to the corrective measures, if any, proposed by U.S. EPA, Respondent shall expeditiously undertake and complete such measures in accordance with the proposed schedule of completion.

3. If Respondent objects to any proposed corrective measures, Respondent shall, within ten days after receiving written notice, initiate the dispute resolution procedure set forth in paragraph B of this Section in which case the notice of disapproval shall constitute the written notice described in paragraph B(1) below.

B. All disputes concerning implementation of the Work shall be resolved pursuant to the following procedure:

1. Any Project Coordinator who determines that a dispute cannot be resolved informally shall provide a written notice to the other Project Coordinator which sets forth:

- a) his understanding as to the nature of the dispute
- b) his understanding as to the technical position of the other Project Coordinators with regard to the dispute
- c) his technical position with regard to the dispute and
- d) the bases for concluding that his technical position on the dispute should be followed rather than the positions of the other Project Coordinator in dispute.

2. Within ten (10) business days of receipt of any notice of dispute, the other Project Coordinator shall

advise the other in writing as to whether they agree or disagree with the position provided in the notice to them pursuant to sub-paragraph 1 of this Section. Any Project Coordinator who disputes a position of the other Project Coordinator shall clearly set forth:

- a) the bases for disputing such statement
- b) his technical position with regard to the disputed statement
- c) the bases for concluding that his technical position on the dispute should be followed rather than the other Project Coordinator in dispute.

3. If, within ten (10) business days from the date of the submission of the reply to the notice of dispute or such date as is agreed in writing by both Project Coordinators, the Parties have not reconciled all issues raised in such notice, U.S. EPA shall provide written notice (the "Final Notice") to Respondent which sets forth the action(s), withholding of action(s), or change(s) to the Work that U.S. EPA determines to be necessary. The terms of the Final Notice shall be deemed "final Agency Action," and shall be immediately binding upon Respondent. The terms of the Final Notice shall be subject to review in a court of competent jurisdiction in accordance with law.

X. ACCESS TO THE SITE

U.S. EPA and their authorized representatives shall have access to the Site at all reasonable times in order

to conduct any activity consistent with CERCLA, including, but not limited to activities observing and monitoring the progress of the Work, taking samples from and inspecting the Site, and inspecting records, operating logs and contracts relating to the presence of hazardous substances at the site. U.S. EPA shall be responsible for duplicating costs.

XI. RETENTION AND AVAILABILITY OF INFORMATION

A. Respondent shall make available to U.S. EPA and shall retain during the pendency of this Consent Order and for a period of six years after its termination, all records and documents in their possession, custody, or control which relate to the performance of this Consent Order, including, but not limited to documents reflecting the results of any sampling, tests or other data or other information generated or acquired by any of them, or on their behalf with respect to the implementation of this Consent Order. U.S. EPA shall be responsible for duplicating Costs.

B. Respondent may assert business confidentiality claims covering part or all of the information provided in connection with this Consent Order pursuant to 40 C.F.R. §2.203(b)

Analytical data concerning soil, water and ambient air samples acquired by any Party shall not be claimed as confidential by the Parties. Information determined to be confidential by U.S. EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is submitted to the U.S. EPA, the public may be given access to such information without further notice to Respondents.

XII. DELAY IN PERFORMANCE; STIPULATED PENALTIES

A. Unless otherwise agreed by U.S. EPA, Respondent shall pay into the Hazardous Substances Response Trust Fund administered by U.S. EPA, the sums set forth below as stipulated penalties for each week that Respondent fails to submit a report or document in accordance with the requirements contained in this Consent Order.

These stipulated penalties shall accrue in the amount of \$500.00 for the first week or any part thereof and \$1,000.00 for each week or any part thereof thereafter.

B. Respondent shall notify U.S. EPA within five (5) days of any delay caused by circumstances beyond its control in the performance of the Work or the submission of reports required under this Consent Order. Such notification shall be in writing and shall describe fully the nature of the delay, the reasons therefor, the expected duration of the delay, the actions which will be taken to mitigate further delay, and the timetable by which the actions in mitigation of the delay will be taken. Respondent shall adopt all reasonable measures to avoid or minimize any such delay.

C. Any failure by Respondent to complete the Work or any portion thereof which results from circumstances beyond the control of Respondent shall not be deemed to be a violation of its obligations under this Consent Order nor shall it make Respondent liable for the stipulated penalties contained in

paragraph XI(A) of this Consent Order provided it has complied with Paragraph XII(b) above. To the extent a delay is caused by such circumstances beyond the control of Respondent, the time for performance hereunder shall be extended.

D. In the event Respondent and U.S. EPA cannot agree that the time for performance shall be extended, the dispute shall be resolved in accordance with the provisions of paragraph IX(B) of this Consent Order. Respondent shall have the burden of proving that the delay was caused by circumstances beyond the control of Respondent. Circumstances beyond the control of Respondent shall include acts of god, delays caused by third-parties and delays caused by governmental units which could not have been overcome by due diligence of Respondent. Circumstances beyond the control of Respondent shall not include increased cost of performance or changed economic circumstance of Respondent.

E. The stipulated penalties set forth in subparagraph XI(A) above shall not preclude U.S. EPA from electing to pursue any other remedies or sanctions, including a suit to enforce the terms of this Consent Order. Said stipulated penalties shall not preclude U.S. EPA from seeking statutory penalties up to the amount authorized by law in the event of Respondent's wilful failure to comply with any requirements of this Consent Order.

XIII. COMPLIANCE WITH ALL LAWS

All work undertaken by Respondent pursuant to this Consent Order shall be performed in compliance with all applicable federal, state and local laws and regulations. Respondent shall be responsible for obtaining all federal, state, or local permits which are necessary for the performance of the Work.

XIV. PARTICIPATION IN COMMUNITY RELATIONS ACTIVITIES

Respondent shall be given notice of and provided with the opportunity to participate in any public meetings which may be held or sponsored by U.S. EPA to explain activities at or concerning the Site, including the findings of the RI/FS.

XV. REIMBURSEMENT OF RESPONSE COSTS

A. Within thirty days of the effective date of this Consent Order, Respondent shall pay to U.S. EPA the sum of \$25,735.47 for response costs incurred by U.S. EPA to the date hereof. Payment to U.S. EPA shall be made in twelve equal monthly installments commencing on the first day of the month following the effective date of this Consent Order payable to the order of the Hazardous Substances Response Trust Fund. Payment shall be forwarded to U.S. EPA, Region V, Regional Hearing Clerk, 230 South Dearborn Street, Chicago, Illinois 60604.

B. Within ninety days of the end of each calendar year during the pendency of this Consent Order U.S. EPA shall provide Respondent with a full accounting and explanation of the response costs incurred by U.S. EPA in connection with the Site during the previous year. Within ninety (90) days of receipt of such accounting and explanation, Respondent shall reimburse U.S. EPA for all such costs associated with U.S. EPA's activities in connection with the Consent Order that are not inconsistent with the National Oil and Hazardous Substances Contingency Plan.

Said costs shall include, but not be limited to, the administrative costs of oversight with respect to the Work and costs of sampling and analysis. Any dispute regarding said costs shall be determined in accordance with Article IX hereof. U.S.EPA shall provide Respondent with the approximate amount of regional costs for administrative oversight quarterly.

XVI. COVENANT NOT TO SUE

Upon termination of this Consent Order pursuant to Section XVI of this Consent Order, and reimbursement of the U.S. EPA as provided in Section XIV, U.S. EPA covenants not to sue Respondent regarding the conduct and completion of the Work or for any costs incurred in connection with or associated with the conduct and completion of the RI/FS undertaken pursuant to this Order.

XVII. TERMINATION AND SATISFACTION

The provisions of this Consent Order shall be deemed satisfied upon Respondent's receipt of written notice from U.S. EPA that Respondent has demonstrated that all of the terms of the Consent Order have been completed. Following completion of all of the requirements of the Work in the Consent Order, Respondent shall request a determination by U.S. EPA as to whether Respondent has satisfactorily completed the Work. U.S. EPA shall provide Respondent with such a determination within 90 days of such a request. In the event U.S. EPA fails to respond within 90 days of receipt of such request, Respondent shall be deemed to have satisfactorily completed the Work.

XVIII. RESERVATION OF RIGHTS

A. This Consent Order is intended to address completion of the RI/FS only and is not intended to affect the responsibilities, if any, of Respondent with respect to the performance of remedial measures at the Site. Except for matters relating to completion of the RI/FS which shall be governed by this Consent Order, U.S. EPA reserves the right to commence further administrative, legal or equitable action against Respondent with respect to remedial measures undertaken or to be undertaken at the Site, including, but not limited to, requiring Respondent to undertake remedial measures at the Site or, in the event public monies are expended, seeking reimbursement of cleanup costs with respect to the Site. Except as expressly provided in this Consent Order, Respondent and U.S. EPA expressly reserve all rights and defenses that they may have, including U.S. EPA's right to disapprove the Work performed by Respondent as provided in this Consent Order and U.S. EPA's right to perform the Work in the event Respondent fails to comply with the terms of this Consent Order, in which event U.S. EPA will have the right to undertake its own remedial investigation, feasibility study, and remedial actions and to seek reimbursement from Respondent thereafter for such costs incurred by the Hazardous Substances Response Trust Fund. Respondent reserves all administrative, legal and/or equitable claims and defenses in the event that U.S. EPA disapproves the Work and/or seeks to require further action of Respondent.

B. Nothing herein is intended to waive or supercede the provisions of the Administrative Order on Consent, dated September 28, 1984, previously entered into between the parties, the terms of which continue to be binding upon the parties.

C. Nothing herein is intended to release, discharge, or in any way affect any claims, causes of action or demands in law or equity against any person, or entity not a Party to this Consent Order from any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release or disposal of any materials or hazardous substances at, to or from the Site. The parties to this Consent Order expressly reserve all rights, claims, demands, and causes of action they have against any and all other persons and entities who are not parties to this Consent Order.

D. Nothing in this Consent Order is intended by the parties to be, nor shall it be, a release or settlement of any private claims for injuries to persons or entities or property, known or unknown, of any private persons or entities.

E. The U.S. EPA recognizes and agrees that Respondent shall have a right to contribution, indemnity and(or) any

other available remedies against any person or entity found to be a responsible person or otherwise liable for contribution, indemnity and (or) other available remedies for any amounts which have been or will be expended by Respondent or paid to the U.S. EPA under this Consent Order or otherwise in connection with any claims asserted by the U.S. EPA, and/or others against Respondent in connection with the Site.

XIX OTHER APPLICABLE LAWS

The parties agree that this Consent Order shall not supersede the requirements of any applicable local, state and Federal laws and regulations.

XX. OTHER CLAIMS

A. Respondent agree that to indemnify and save and hold harmless U.S. EPA from any and all claims or cause of action arising from negligent acts or omissions or willful misconduct of Respondent in carrying out the activities pursuant to this Consent Order.

B. U.S. EPA shall not be held liable under or as a party to any contract entered into by Respondent in carrying out the activities pursuant to this Consent Order. Respondent shall not be held liable under or as a party to any contract entered into by U.S. EPA in carrying out the activities pursuant to this Consent Order except to the extent Respondent may be liable for the costs incurred pursuant to such under Article XV.

C. Respondent agrees not to make any claim pursuant to Section 112 of CERCLA, 42 U.S.C. §7612 directly or indirectly against the Hazardous Substance Response Trust Fund established by that act for expenses related to this Consent Order

XXI. ADMISSIONS

Nothing in this Consent Order, including the Work Plan attached hereto as Exhibit A, is intended by the parties to be, nor shall it be, an admission of facts or law, an estoppel or a waiver of defenses by Respondents for any purpose.

XXII. PUBLIC COMMENT AND EFFECTIVE
DATE OF ADMINISTRATIVE ORDER

Within fifteen (15) days of the date of the execution of this Consent Order, U.S. EPA shall announce the availability of this Consent Order to the public for review and comment. U.S. EPA shall accept comments from the public for a period of thirty (30) days after such announcement. At the end of the comment period, U.S. EPA shall review all such comments and shall either:

- a) determine that the Consent Order should be made effective in its present form, in which case Respondent shall be so notified in writing. The Consent Order shall become effective on the date Respondent receives such notification; or
- b) determine that modification of the Consent Order is necessary, in which case Respondent will be informed as to the nature of all required changes. If Respondent agrees to the modifications, the Consent Order shall be so modified and shall become effective upon signature of the parties.

In the event that Respondent is unwilling to agree on modifications required by U.S. EPA as a result of public comment, this Consent Order may be withdrawn by U.S. EPA. In such an event, U.S. EPA reserves all rights to take such actions as they deem necessary, and Respondent reserves all rights to contest such actions.

IT IS SO AGREED:

RIVERDALE CHEMICAL COMPANY

By: Michael G. Champion

Date: February 15, 1985

IT IS SO ORDERED:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, REGION V

By: Valdas V. Adamkus
Valdas V. Adamkus
Regional Administrator
United States Environmental Protection
Agency, Region V

Date: February 27th, 1985

EXHIBIT A
REMEDIAL INVESTIGATION/FEASIBILITY STUDY
SCOPE OF WORK

1.0 Scope of Work

Respondent shall perform for the U.S. EPA the following: (1) Remedial Investigation, and (2) Feasibility Study. The Remedial Investigation and Feasibility Study ("RI/FS") shall consist of the tasks set forth in Paragraph 3.00 to Paragraph 7.00 below. The results of the RI/FS shall be embodied in RI/FS report which shall be submitted within the time set forth in paragraph V of the Consent Order. During the remedial investigation and feasibility study, Respondent shall work cooperatively and consult regularly with U.S. EPA.

1.1 Purpose of Remedial Investigation and Feasibility Study

The purpose of the RI/FS is to determine the full extent of contamination at the Site including soils, surface waters, sediments and groundwater with hazardous substances, to assess the extent of past releases and potential for future releases of such substances, and to provide for the development of the remedial plans and alternatives assessment described below.

2.0 Safety Plan and Quality Assurance Plan

Prior to initiating any field activities at the Site and within the period set forth in the Consent Order, Respondent shall develop and submit to the U.S. EPA for approval a safety plan to protect the health and safety of personnel involved in the RI/FS. The plan shall be consistent with all applicable state and federal laws and regulations, including but not limited to the following:

- a) Section 111(c)(6) of CERCLA;
- b) U.S. EPA Order 1440.3 -- Respiratory Protection;
- c) U.S. EPA Order 1440.2 -- Health and Safety Requirements for Employees Engaged in Field Activities;
- d) U.S. EPA Occupational Health and Safety Manual;
- e) U.S. EPA Interim Standard Operating Safety Procedures and other U.S. EPA guidance as developed; and
- f) Illinois Occupational Safety and Health Act.

2.1 Prior to initiating any field activities at the site and within the period specified in the Consent Order, Respondent shall develop and submit for U.S. EPA approval a Quality Assurance Plan which shall be prepared in accordance with U.S. EPA Interim Guidelines and specifications for preparing Quality Assurance Project Plans (QAMS-005/80). Said Plan shall contain, at a minimum, of the following:

- a. QA objectives and routine assessment of procedures for measurement data in terms of precision, accuracy, completeness, representativeness, and comparability;
- b. QA performance and system audits, including frequency;
- c. Calibration procedures and references, including frequency;
- d. Internal QC checks and frequency;
- e. Preventive maintenance procedures and schedules;
- f. Sampling procedures;
- g. Sample custody;
- h. Corrective action;
- i. QA reports to management.
- j. Filed protocols should be described which include:
 - (i) Decontamination methods for equipment
 - (ii) Decontamination methods for sampling equipment between samples;
 - (iii) Hole abandonment procedures; and
 - (iv) Disposal procedures for contaminated soils and groundwater.

3.0 RI/FS Description of Current Situation (Task 1)

A part of the RI/FS Report shall include a description of the background information pertinent to the site and its problems and outline the purpose and need for remedial investigation at the site. The data gathered during any previous investigations or inspections and other relevant data should be used. The foregoing shall include the following:

- a. Site Background. Prepare a summary of the regional location, pertinent area boundary features, and general site physiography, hydrology, and geology. The total area of the site and the general nature of the problem, including pertinent history relative to the exposure of the Site to hazardous substances should be defined.
- b. Nature and Extent of Problem. Prepare a summary of the actual and potential on-site and off-site health and environmental effects. This may include, but is not limited to, the type, physical states, and amounts of the hazardous substances, pathways of exposure, contaminated releases such as leachate or runoffs, and any human exposure. Emphasis should be placed on describing the threat or potential threat to public health.
- c. History of Response Actions. Prepare a description of any previous response actions conducted. The scope of the RI/FS should be developed to address the problems and questions that have resulted from the previous work at the site.
- d. Define Boundary Conditions. Establish site boundary conditions to limit the area of site investigations. The boundary conditions should be set so that subsequent investigations will cover the contaminated media in sufficient detail to support following activities (i.e., the feasibility study). The boundary conditions may also be used to identify boundaries for site access control and site security.
- e. Site map. Prepare a site map showing all wetlands, water features, drainage patterns, tanks buildings, utilities, paved areas, easements, right-of-ways, and other features. The site map and all topographic surveys shall be of sufficient detail and accuracy to locate and report all existing and future work performed at the site. Where exposed soils have been covered with asphalt, rock, concrete or other structures, the dates of construction should be provided.

4.0 RI/FS - Site Investigation (Task 2)

Respondent shall conduct a remedial investigation at the site sufficient to characterize contamination (both laterally and vertically) at the site and immediately surrounding areas adjacent to the site ant to determine the actual or potential hazard to public health and environment. The site investigation shall be sufficient to obtain data of

adequate technical content to assess and evaluate remedial alternatives. Respondent shall develop and submit to U.S. EPA a Sampling Plan which it shall implement as approved and/or modified by U.S. EPA except that Respondent shall not be required to conduct sampling on property not owned or controlled by it if, after dilligent efforts, it is unable to obtain access to such property. Respondent shall implement the Sampling Plan immediately upon receipt of written notice from U.S. EPA and shall proceed in accordance with the schedule set forth in the Sampling Plan, as approved or modified. The Sampling Plan shall include as a minimum the following:

- (a) Provisions for determining contamination of hazardous substances in the surface, near-surface and subsurface soils at the site. Parameters to be included in this soil sampling shall be all U.S. EPA organic priority pollutants as described in Attachment A and 2,3,7,8 - TCDD. For surface soil samples only, the Sampling Plan may provide that the parameters for specified soil samples be limited to pesticides (as described on Attachment A) and 2,3,7,8 - TCDD provided that the final sampling data is sufficient to characterize the site and immediately surrounding areas adjacent to the site for all U.S. EPA organic priority pollutants and 2,3,7,8-TCDD.
- (b) Provisions for determining contamination of hazardous substances in the groundwater at the site. Parameters to be included in the groundwater sampling shall be all U.S. EPA organic priority pollutants (as described in Attachment A) and 2,3,7,8 - TCDD. The plan may provide that groundwater monitoring will not be required in the event that, after a complete characterization of the geology and water table underlying the Site, there is no liklihood of migration of contaminants to the groundwater considering the depth of contamination. The plan shall provide for a sufficient number of core samples to make the aforesaid determination.
- (c) Provisions for identifying and locating sewer lines, buried pipe and equipment which may be contaminated with hazardous substances and provisions for ascertaining the extent of such contamination.
- (d) A schedule for implementation and completion of the requirements of the Sampling Plan.

4.1 All sampling and testing shall conform to guidelines in the User's Guide to the USEPA Contract Laboratory Program (CLP) prepared by the Sample Management Office of CLP and published August, 1982 and NEIC chain of custody procedures.

5.0 RI/FS - REMEDIAL INVESTIGATION REPORT (Task 3)

Respondent shall prepare and submit to U.S. EPA a thorough analysis and summary of all site investigations and their results. The objective of this task will be to ensure that the investigation data are sufficient in quality and quantity to support the feasibility study.

The results and data from all site investigations must be organized and presented logically so that the relationship between site investigations for each medium are apparent.

5.1

Upon completion of Tasks 1 and 2 set forth in Paragraphs 3.0 and 4.0, Respondent shall prepare a draft Remedial Investigation Report. The draft RI Report shall analyze all site investigations and develop a summary of the type and extent of contamination at the site. This analysis must include all significant pathways of contamination and an exposure assessment. The exposure assessment should describe any threats to public health, welfare, or the environment. The analysis should discuss the degree to which either source control or off-site actions are required to significantly mitigate the threat to public health, welfare, or the environment. If the results of the investigation indicate that no threat or potential threat exists, a recommendation of no action should be made.

The RI Report shall also include the following:

- a. Description of soil/sediment sampling procedure;
- b. Summary of soil/sediment laboratory test results;
- c. Copies of soil/sediment laboratory data sheets;
- d. Description of drilling and installation of wells;
- e. Copies of boring logs;
- f. Description of groundwater sampling procedure;
- g. Summary of groundwater test results;
- h. Copies of groundwater laboratory data sheets; and
- i. Discussion of project objectives for evaluation in the FS.

The draft Remedial Investigation report shall be submitted to U.S. EPA. Respondent shall revise and/or supplement the draft Remedial Investigation report in accordance with comments received by U.S. EPA. The revised report shall be submitted as part of the RI/FS report.

6.0 RI/FS - ALTERNATIVE REMEDIAL ACTIONS EVALUATION (Task 4)

The RI/FS report shall include an evaluation of alternative remedial actions for the site on the basis of economic, environmental, and engineering criteria and shall select an alternative

or combination of alternatives for conceptual design and implementation. The level of detail used in these evaluations identifies only comparative or relative differences among alternatives. This report shall include at a minimum a discussion of the following:

(a) Description of Proposed Response. The site specific objectives, screening criteria, and proposed response should be developed.

(b) Development of Alternatives. The objective of this subtask is to compile a list of potential source control and offsite remedial action alternatives. The alternatives would be based on site-specific objectives and public health and environmental concerns.

(c) Initial Screening of Alternatives. The objective of this subtask is to evaluate alternative remedial actions based on cost, effects of alternative, and acceptable engineering practices. Alternatives that far exceed the costs of other alternatives evaluated and do not provide substantially greater public health or environmental benefit would be excluded from further consideration. Only those alternatives that effectively contribute to the protection of public health, welfare, or the environment would be considered further. Alternatives must also be considered feasible, be applicable to the problem, and represent a reliable means of addressing the problem.

(d) Detailed Analysis of Alternatives. The objective of this subtask is to develop engineering details on the remaining alternatives and Order-of-Magnitude cost estimates. These engineering details would include alternative descriptions and conceptual site layout drawings, operation and maintenance requirements, safety requirements, and special engineering considerations. Another objective would be to assess each alternative in terms of the extent to which it is expected to effectively mitigate and minimize damage to, and provide adequate protection of, public health, welfare, and the environment, relative to the other alternatives analyzed.

7.0 RI/FS - FEASIBILITY STUDY REPORT (Task 5)

Respondent shall prepare and submit to U.S. EPA a report (which may be combined with the report required under paragraph 6.0) which shall compile and describe the methods, results, and conclusions of the alternative actions evaluation task. The report would incorporate and include the following:

- a. Summary of the hazards and potential hazards for which corrective action is required;
- b. Detailed analysis of alternative technologies which can be employed to effectuate and corrective action, such analyses to include those items outlined in 40 CFR 300.68(i)(2)(a) through (E) of the National Contingency Plan;
- c. Description of all studies performed or evaluated to confirm the applicability of each alternative assessed;
- d. Unit cost estimates for each alternative;
- e. Operation and maintenance requirements with cost estimates, for each alternative;
- f. Long-term integrity for each alternative;
- g. Timeliness of implementation for each alternative; and
- h. A discussion of conformity to federal, state, and local laws and regulations, for each alternative.

ATTACHMENT A

ACID COMPOUNDS

| |
|----------------------------|
| 2,4,6- trichlorophenol |
| p-chloro-m-cresol |
| 2- chlorophenol |
| 2,4-dichlorophenol |
| 2,4-dimethylphenol |
| 2- nitrophenol |
| 4-nitrophenol |
| 2,4-dinitrophenol |
| 4,6-dinitro-2-methylphenol |
| pentachlorophenol |
| phenol |

BASE/NEUTRAL COMPOUNDS

| |
|-------------------------------|
| acenaphthene |
| benzidine |
| 1,2,4-trichlorobenzene |
| hexachlorobenzene |
| hexachloroethane |
| bis(2-chloroethyl)ether |
| 2-chloronaphthalene |
| 1,2-dichlorobenzene |
| 1,3-dichlorobenzene |
| 1,4-dichlorobenzene |
| 3,3'-dichlorobenzidine |
| 2,4-dinitrotoluene |
| 2,6-dinitrotoluene |
| 1,2-diphenylhydrazine |
| fluoranthene |
| 4-chlorophenyl phenyl ether |
| 4-bromophenyl phenyl ether |
| bis (2-chloroisopropyl) ether |
| bis (2-chloroethoxy) methane |
| hexachlorobutadiene |
| hexachlorocyclopentadiene |
| isophorone |
| naphthalene |
| nitrobenzene |
| N-nitrosodiphenylamine |
| N-nitrosodipropylamine |
| bis (2-ethylhexyl) phthalate |
| benzyl butyl phthalate |
| di-n-butyl phthalate |
| di-n-octyl phthalate |
| diethyl phthalate |
| dimethyl phthalate |
| benzo(a)anthracene |

BASE/NEUTRAL COMPOUNDS

ug/l
or ug/kg
(circle one)

| |
|------------------------|
| benzo(a)pyrene |
| benzo(b)fluoranthene |
| benzo(k)fluoranthene |
| chrysene |
| acenaphthylene |
| anthracene |
| benzo(ghi)perylene |
| fluorene |
| phenanthrene |
| dibenz(a,h)anthracene |
| indeno(1,2,3-cd)pyrene |
| pyrene |

VOLATILES

| |
|---------------------------|
| acrolein |
| acrylonitrile |
| benzene |
| carbon tetrachloride |
| chlorobenzene |
| 1,2-dichloroethane |
| 1,1,1-trichloroethane |
| 1,1-dichloroethane |
| 1,1,2-trichloroethane |
| 1,1,2,2-tetrachloroethane |
| chloroethane |
| 2-chloroethylvinyl ether |
| chloroform |
| 1,1-dichloroethene |
| trans-1,2-dichloroethene |
| 1,2-dichloropropane |
| trans-1,3-dichloropropene |
| cis-1,3-dichloropropene |
| ethylbenzene |
| methylene chloride |
| chloromethane |
| bromomethane |
| bromoform |
| bromodichloromethane |
| fluorotrichloromethane |
| dichlorodifluoromethane |
| chlorodibromomethane |
| tetrachloroethene |
| toluene |
| trichloroethene |
| vinyl chloride |

PESTICIDES

| |
|-------------------------|
| aldrin |
| dieldrin |
| chlordane |
| 4,4'-DDT |
| 4,4'-DDE |
| 4,4'-DDD |
| α -endosulfan |
| β -endosulfan |
| endosulfan sulfate |
| endrin |
| endrin aldehyde |
| heptachlor |
| heptachlor epoxide |
| α -BHC |
| β -BHC |
| δ -BHC |
| γ -BHC (lindane) |
| PCB-1242 |
| PCB-1254 |
| PCB-1221 |
| PCB-1232 |
| PCB-1248 |
| PCB-1260 |
| PCB-1016 |
| toxaphene |

DIOXINS

2,3,7,8-tetrachlorodibenzo-p-dioxin